

**REMARKS**

Claims 1-10, 15-18, and 21 are pending in the application. Claims 1 and 7 are independent. By the foregoing Amendment, Applicants seek to amend claim 7. It is believed that these changes introduce no new matter and their entry is respectfully requested.

Rejection of Claims 7-10 and 15-18 Under 35 U.S.C. §102(b)

In paragraph 4 of the Office Action, the Examiner rejected claims 7-10 and 15-18 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,434,175 to Zah (hereinafter "Zah"). A claim is anticipated only if each and every element of the claim is found in a reference. (MPEP §2131 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). The identical invention must be shown in as complete detail as is contained in the claim. *Id. citing Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). Applicants respectfully traverse the rejection.

Amended claim 7 recites in pertinent part "a set of optical amplifiers formed in the integrated optical circuit, an individual optical amplifier being a silica-based optical amplifier having a silica-based core, *the set of optical amplifiers being coupled to combine pump light and optical signal light*" (emphasis added). The subject matter for the change comes from original claim 16, which is sought to be canceled by the foregoing Amendment.

With regard to claim 7, the Examiner asserts that Zah teaches silica-based optical amplifiers (118) formed in an integrated circuit and coupled to input waveguide elements, an AWG (320) formed in the integrated circuit and coupled to the optical amplifiers, waveguide elements coupled to the optical amplifier outputs, and a star coupler in the AWG coupled to the waveguide elements. With regard to claim 16, the Examiner asserts that Zah teaches that the optical amplifiers are coupled to combine pump light and optical signal light and states that components 310 of Zah are coupled to components 118 to support the proposition. Applicants respectfully disagree.

Applicants respectfully submit that Zah does not teach or suggest that the optical amplifiers are coupled to combine pump light and optical signal light and that the optical gain element 310 is not a pump source for the gain elements 118 as asserted by the Examiner. For example, Zah teaches at Column 6, lines 38-45 that "[o]ne way to align the wavelength combiner of the phasor multiplexer with respect to that of the DBRs is shown in FIG. 9. By selecting which shared output optical gain element 310 is to be biased to select which comb, the wavelength comb of the phasor 320 can be discretely tuned such that wavelength detuning is minimized. When unbiased, the unbiased output optical gain elements 310 serve no function since they are optically opaque" That is, the shared output optical element 310 selects the wavelength comb of the phasor 320 to be tuned and has no other purpose. Because it is otherwise optically opaque (*i.e.*, unable to transmit light) it cannot couple light as proposed by the Examiner.

Because the Examiner has not shown where Zah teaches the identical invention as disclosed in claim 7, Applicants respectfully submit that the Examiner has not met the requirements of MPEP §2131 and thus has made out a *prima facie* case of anticipation with respect to claim 7. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claim 7.

Claims 8-10, 15, and 17-18 properly depend from claim 7. As such, Applicants respectfully submit that the Examiner has not met the requirements of MPEP §2131 or made out a *prima facie* case of anticipation with respect to claims 8-10, 15, and 17-18 either. By the foregoing Amendment, Applicants seek to cancel claim 16, rendering the rejection of it moot. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 8-10 and 15-18.

Rejection of Claims 1-6 and 21 Under 35 U.S.C. § 103(a)

In paragraph 6 of the Office Action, the Examiner rejected claims 1-6 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Zah in view of common knowledge in the art.

success, and (3) that the references teach or suggest each and every element of the claimed invention. (MPEP §2143.) Applicants respectfully traverse the rejection.

The Examiner asserts that Zah discloses an integrated optical circuit with a set of amplifiers and AWGs but fails to explicitly disclose a set of transceivers to couple a set of optical channels into an optical fiber that is input to the integrated circuit. The Examiner states that the use of transceivers is widely known in the art for transmitting, receiving, or processing signals and that an optical fiber would be required to send such a signal to a device. The Examiner also states that it would be obvious to one skilled in the art at the time the invention was made that a set of transceivers coupled to an optical fiber would be required to process and transmit signals in the optical communication system of Zah. Applicants respectfully disagree.

MPEP §2144.03 provides that in limited circumstances, it may be appropriate to rely on "common knowledge" in making a rejection. MPEP §2144.03 provides further that there must be some form of evidence to support an assertion of common knowledge.

Applicants respectfully submit that the Examiner has failed to comply with MPEP §2144.03 in that the Examiner has not provided any evidence in support of the assertion that the use of transceivers is widely known in the art for transmitting, receiving, or processing signals and that an optical fiber would be required to send such a signal to a device. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 1-6 and 21 or provide documentary evidence, such as an *affidavit*, for example, if the rejection is to be maintained.

Rejection of Claim 5 Under 35 U.S.C. § 103(a)

In paragraph 7 of the Office Action, the Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Zah as applied to claim 1 above and in further view of common knowledge in the art. Applicants respectfully traverse the rejection.

The Examiner asserts that Zah discloses an integrated optical waveguide multiplexing device, but fails to explicitly disclose a demultiplexer coupled to an AWG. The Examiner states that it is common practice in the DWDM art to demultiplex signals that have been multiplexed in order to properly route and transmit optical signals. The Examiner asserts that it would have been obvious to couple a demultiplexer to the multiplexer of Zah in order to efficiently and properly route and transmit optical signals of a DWDM system. Applicants respectfully disagree.

Applicants respectfully submit that the Examiner has failed to comply with MPEP §2144.03 in that the Examiner has not provided any evidence in support of the assertion that it is common practice in the DWDM art to demultiplex signals that have been multiplexed in order to properly route and transmit optical signals. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claim 5 or provide documentary evidence, such as an *affidavit*, for example, if the rejection is to be maintained.

Rejection of Claim 21 Under 35 U.S.C. § 103(a)

In paragraph 8 of the Office Action, the Examiner rejected claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Zah as applied to claim 7 above and in further view of U.S. Patent No. 6,137,939 to Henry et al. (hereinafter "Henry"). Applicants respectfully traverse the rejection.

Applicants respectfully remind the Examiner claim 21 properly depends from patentable claim 7, for which Applicants respectfully submit that the Examiner has not met the requirements of MPEP §2131 and thus has not made out a *prima facie* case of anticipation. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claim 21.

**CONCLUSION**

Applicants submit that all grounds for rejection have been properly traversed or rendered moot, and that the application is in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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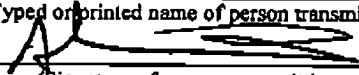
Jan Little-Washington  
Jan Little-Washington  
Reg. No.: 41,181

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Examiner: Wong, Eric K.  
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